Ontario

Ministry of
Health and Long-Term Care

PHERO

Public Health and
Epidemiology Report Ontario

Volume 14, Number 4 http://www.health.gov.on.ca April 30, 2003

IN THIS ISSUE

The Public Health and Epidemiology Report Ontario is published monthly, by the:

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ISSN 1181-960X

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MIDDLESEX-LONDON HEALTH UNIT
Middlesex London Teaching Health Units

PATTERNS OF SCREENING FOR WOMAN ABUSE: HEALTHY BABIES, HEALTHY CHILDREN PROGAM

Abstract

Woman abuse is a significant health and social issue. Canadian research describing the extent of this serious problem and patterns of screening is relatively scant. The purpose of this article is to highlight some of the literature describing the extent of the problem and then to describe current patterns of screening for and disclosure of women abuse as it relates to the Healthy Babies, Healthy Children (HBHC) Program established in public health units in Ontario.

Purpose

The goal of this study was to describe patterns of screening for and disclosure of woman abuse among women contacted by Public Health Nurses (PHNs) through the HBHC Program.

Context for Current Study

Violence Against Women Survey: Statistics Canada

In 1993, Statistics Canada released the results of the *Violence Against Women Survey*[1]. This one-time-only telephone survey conducted from February to June 1993, focused on women 18 years of age and over living in Canada. Of the 13,500 women who were successfully contacted, 12,300 women agreed to participate, a response rate of 91%. Women were asked about their experiences of physical and sexual violence, sexual harassment, and perceptions of their personal safety. Measures of violence were restricted to Criminal Code definitions of assault and sexual assault. Violence by current and previous partners (both husbands and common-law partners) was measured by responses to the following question: "I would like you to tell me if your husband/partner has ever done any of the following to you". It was estimated that 2,652,000 or 29% of ever married/cohabitating Canadian women had been subjected to violence at the hands of their partner at some point in the relationship. Further, 12% of Canadian women aged 18-24 reported at least one incident of violence by a partner in a one-year period, compared to the national average of 3% of all married/cohabitating women. This prevalence of violence shocked many people and assisted in profiling woman abuse as a major health issue in Canada.

Public Health Sector Work

Concurrently, in the public health sector, the Canadian Public Health Association (CPHA) and the Ontario Public Health Association (OPHA) both published papers on violence in 1994[2] and 1997[3] respectively. In Ontario, this resulted in the establishment of the OPHA Violence Prevention Workgroup. The purpose of the workgroup is to consult and facilitate co-ordination regarding violence prevention initiatives relevant to Public Health Units, Community Health Centres and communities across Ontario.

In 1998, Peel Regional Health Unit published a report on woman abuse entitled *Shades of Grey*[4]. Some of the Violence Prevention Task Force findings relevant to this study include that:

- all women are at risk for violence;
- pregnancy places women at higher risk for violence; and
- sexual violence is epidemic.

The Effective Public Health Practice Project, 2001

A systematic review of the literature conducted by *The Effective Public Health Practice Project*[6] found that:

- between 11% and 21% of pregnant women experience abuse;
- abused women experience significant physical injuries ranging from bruising to internal injuries; and

- children are impacted by abuse, experiencing a variety of poor social, educational and psychological outcomes, including school difficulties, memory challenges, anxiety and lack of social and emotional responsiveness.

Task Force on the Health Effects of Woman Abuse: Middlesex-London Health Unit

In 1999, the Middlesex-London Health Unit (MLHU) established the *Task Force on the Health Effects of Woman Abuse*[5]. The mandate of the Task Force was to examine existing screening protocols to determine the required elements for effectiveness and then to adopt a protocol to be applied by health care professionals in a routine, universal and comprehensive manner. The goal of universal screening is to promote early identification of woman abuse whether or not indicators of abuse are present. The protocol would facilitate assessment and documentation of the health effects of woman abuse, provide the opportunity to address immediate safety concerns, and make appropriate, woman-directed referrals. The final product of the Task Force is a screening protocol called **R**outine **U**niversal **C**omprehensive **S**creening or **RUCS**.

The Healthy Babies, Healthy Children Program

In 1999, the Ministry of Health and Long-Term Care (MOHLTC) established the HBHC Program[7] in Ontario's 37 public health units to identify infants at risk of poor child development for a wide variety of reasons, including violence in the home. Prior to discharge, the hospital nurse, together with every consenting postpartum woman, completes the Parkyn Screening Tool (PST). Any abuse disclosure is noted on the PST form. The completed form is then forwarded to the local health unit.

A PHN calls every client screened with the PST within 48 hours of discharge from hospital irrespective their score. During that call, the client is offered an in-home visit by a PHN and, if the client wishes, the visit is arranged. The form used by the telephone PHN includes an area to record abuse disclosure should that occur.

The purpose of the in-home visit is to assess infant/maternal health, promote a positive transition to parenting and to further assess the risk potential for poor child development.

Families identified as having infants potentially at-risk of poor development (PST score >9) are assessed using a standardized form, the Family Assessment Tool (FA). Questions about past and present abuse are part of this comprehensive tool, administered in the privacy of the woman's home. Clients who are not identified as being at-risk are assessed according to local health unit protocols, which may or may not include prompts regarding abuse. Pertinent information is then recorded on the health unit record according to local protocols.

Methods

Sample

Inclusion Criteria. The study reviewed all MLHU HBHC Program records on postpartum mothers of babies born between January 1, 2000 and December 31, 2000 containing:

- a PST completed in hospital prior to the mother and infant's discharge to home;
- a form completed by a PHN during a brief telephone assessment within 48 hours of discharge; and
- if available, any record of an in-home visit completed by a PHN.

Sample Size. Sample size calculations done in PEPI version 3.00[8], based on an alpha level of 0.05 and a beta level of 0.20, indicated that information from all 3,516 records was needed if the confidence interval around the expected proportions of abuse disclosure in several of the subgroups was to be less than 2%. Sample size calculations were based on a recent Statistics Canada report that indicated that 8% of the general population disclosed current abuse while almost 30% reported a history of abuse[9].

Ethical Review

This study was reviewed and approved by the Office of Research Ethics of the University of Western Ontario.

Data Collection

Study research assistants (RAs) reviewed all records that met the inclusion criteria filed under years 2000 and 2001 in the filing cabinets. Records of infants born in 1999 but located in the 2000 cabinet were excluded from the study. Records of infants born in 2000 but not discharged until 2001, were added to the study. Any case still actively followed by a PHN or Family Home Visitor at the time of data collection was stored separately. These files were few in numbers and were not retrieved for the study.

Using predefined criteria, the RAs reviewed each record for evidence of documentation by the PHN regarding abuse

inquiry, abuse disclosure and any referral decisions. Abstracted, non-nominal information was directly entered into an Excel spreadsheet. The co-investigators checked the input of 100 randomly selected records for accuracy. The senior RA did further validity checks during the preliminary data analysis. The research team completed the data analysis using SPSS/PC, Version 9.0 (Chicago, Ill.) and PEPI, Version 3.0[8].

Findings

Study Population

The demographic characteristics of the study population of 3,516 women are presented in Table 1.

Table 1: Study Population Characteristics

	Number (Total=3,516)	% of Study Population
Age		
- Teens	211	6.0
- Twenties	1,627	46.3
- Thirties	1,612	45.9
- Forties	66	1.9
Parity		
- primiparous	1,678	47.7
- second child	1,206	34.3
- third child	425	12.1
- fourth child or more	207	5.9
- mean # children	1.79	NA
Partner in Home		
- yes	3,008	85.6

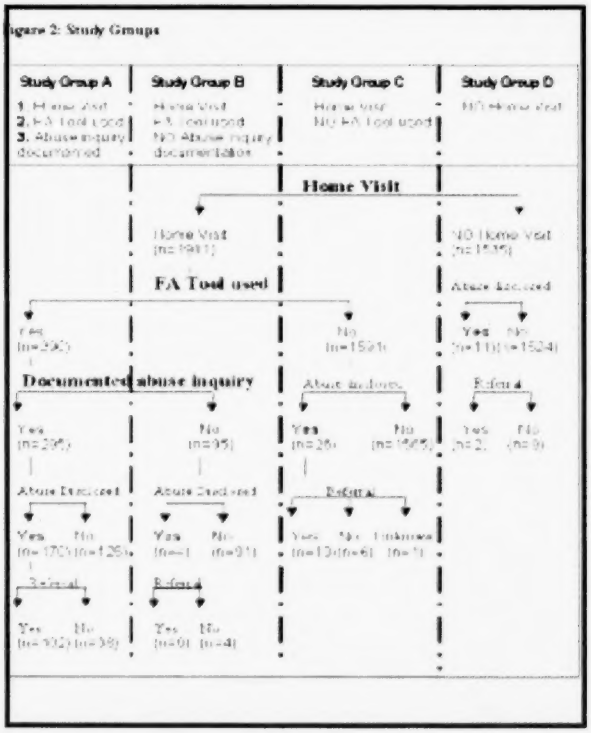
Study Groups

Figure 2 identifies the comparison groups used in the study. Among the 3,516 women eligible for the study, 1,535 did NOT receive a home visit (Group D). Among the 1,981 women who received a home visit, 1,591 were NOT assessed with the FA (Group C). Among the 390 who were assessed with the FA, 95 had NO documentation of abuse inquiry (Group B), while among 295 there is documentation of abuse inquiry (Group A).

Figure 2 also shows the number of women in each group who disclosed abuse and whether or not there is documentation of a referral.

Characteristics of the Sample

As shown in Figure 2, of the 3,516 women eligible for the study, there is documentation of abuse inquiry for 295 women (Group A). Thus, there is documented evidence of screening for woman abuse among 8.3% (295/3,516) of postpartum women. Among the 390 women assessed



with the FA (Groups A and B), abuse inquiry was documented on the charts of 295 (75.6%) of the women. These results suggest that if prompted and if appropriate, PHNs will ask clients about woman abuse and document this abuse inquiry.

As seen in Table 2, the demographic characteristics of the women for whom there is documentation of abuse inquiry (Group A) are significantly different ($p<0.05$) from characteristics of the women who received a home visit but were not assessed with the FA (Group C) and those of the women who did not receive a home visit (Group D). However, women in Group A were not statistically significantly different from women in Group B.

Table 2: Characteristics of the Four Study Groups

Characteristic	Group A 1. Home Visit 2. FA Tool used 3. documented abuse inquiry (N=295)	Group B 1. Home Visit 2. FA Tool used 3. NO documented abuse inquiry (N=95)	Group C 1. Home Visit 2. FA Tool NOT used (N=1,591)	Group D 1. No Home Visit (N=1,535)
Age				
- Teens	84 (28.5%)	22 (23.2%)	59 (3.7%)	46 (3.0%)
- Twenties	140 (47.5%)	37 (38.9%)	752 (47.3%)	698 (45.5%)
- Thirties	67 (22.7%)	34 (35.8%)	750 (47.1%)	761 (49.6%)
- Forties	4 (1.4%)	2 (2.1%)	30 (1.9%)	30 (2.0%)
Parity				
- primiparous	157 (53.2%)	62 (65.3%)	924 (58.1%)	535 (34.9%)
- second child	82 (27.8%)	20 (21.1%)	473 (29.7%)	631 (41.1%)
- third child	26 (8.8%)	8 (8.4%)	128 (8.0%)	263 (17.1%)
- fourth child or more	30 (10.2%)	5 (5.3%)	66 (4.1%)	106 (6.9%)
Partner in Home				
- yes	165 (55.9%)	63 (66.3%)	1,423 (89.4%)	1,357 (88.4%)

Women who were assessed with the FA, were significantly more likely to be in their teens, and more likely to NOT have a partner in the home than women who received a home visit, but were not assessed with the FA (Group C). Women in Groups A and B were significantly more likely to be in their teens, more likely to be primiparous and more likely to NOT have a partner in the home than women who did not receive a home visit (Group D).

Abuse Disclosure

A total of 211 (6.0%) women disclosed abuse. The great majority, 200 (94.8%), disclosed abuse during the in-home visit as part of the face-to-face interview with the PHN.

As seen in Table 3, women in Group A were more likely to disclose abuse than women in Groups B, C or D. As discussed above, women in Groups A and B are demographically similar and women in both groups were identified by a PHN during previous contact as having infants at-risk for poor child development. Yet, disclosure rates are dramatically different. This suggests that if women are asked, they may be more likely to disclose and the corollary, that if PHNs don't ask, clients are unlikely to disclose abuse.

Table 3: Characteristics of the Four Study Groups

Characteristic	Group A 1. Home Visit 2. FA Tool used 3. documented abuse inquiry	Group B 1. Home Visit 2. FA Tool used 3. NO documented abuse inquiry	Group C 1. Home Visit 2. FA Tool NOT used	Group D 1. No Home Visit
	(N=295)	(N=95)	(N=1,591)	(N=1,535)
Disclosed Abuse	170 (57.6%)	4 (4.2%)	26 (1.6%)	11 (0.7%)

Table 4 illustrates that 131 (62.1%) women who disclosed abuse indicated that this was previous abuse. However, 18.5% women disclosed both previous and current abuse.

Table 4: Immediacy of Disclosed Abuse

	Number	% of those who disclosed abuse
Immediacy of Disclosed Abuse		
- previous abuse only	131	62.1
- current abuse only	15	7.4
- unknown / not documented	26	12.4
- both current and previous	39	18.5
Total	211	100

As seen in Table 5, compared to women who did not disclose abuse, a significantly greater proportion of women who disclosed were in their teens. Further, a significantly greater proportion of women who disclosed abuse had no partner in the home. Among women who reported current abuse only, a greater proportion of them were in their forties. Also, among women who disclosed previous abuse only, a greater proportion reported that this was their first child.

Table 5: Characteristics by Immediacy of Disclosed Abuse

	Never	Ever	Previous	Current	Unknown	Previous & Current
	(n=3,305)	(n=211)	(n=131)	(n=15)	(n=26)	(n=39)
Age						
- % teens	4.7	26.1*	31.3*	26.7*	--	25.6*
- % twenties	45.6	52.6	53.4	26.7	69.2*	48.7
- % thirties	47.6	19.0*	14.5*	26.7	26.9	25.6*
- % forties	1.8	2.4	0.8	20.0*	3.8	--
Parity						
- % primiparous	47.4	52.1	57.3	46.7	46.2	41.0
% NO partner in home	12.2	49.8*	56.5*	46.7*	19.2	48.7*

Note: * significantly different from "Never", p<0.05

Referral

Among the 210 women who disclosed abuse and for whom information about referral was available in the client record, 52.4% received a referral. Referral was significantly associated with immediacy of disclosed abuse. Table 4 illustrates that among those who disclosed only previous abuse, 44.6% received a referral. Yet among those who disclosed current abuse, 86.7% received a referral and among those who disclosed both previous and current abuse, 94.9% received a referral.

It is unlikely that 100% of women who disclosed current abuse would accept a referral by the PHN for a number of reasons. For example, the client may have already referred herself to an appropriate agency or the client may have refused any referral.

Table 6: Referral by Immediacy of Disclosed Abuse

	None	PHN only	HU only	Outside
Previous only (n=130)	55.4%	11.5%	8.5%	24.6%
Current only (n=15)	13.3%	26.7%	6.7%	53.3%
Unknown (n=26)	92.3%	--	--	7.7%
Previous and current (n=39)	5.1%	2.6%	10.3%	82.1%
Total (n=210)	47.6%	9.5%	7.6%	35.2%

Note: Pearson Chi-Square value 78.6, p<0.000

Discussion and Conclusions

Screening

The study results suggest that as few as 8.3% of postpartum women are being asked about abuse. If clients were just as likely to disclose spontaneously as disclose when asked, it is likely that the distribution for disclosure would have been more widespread throughout the study population rather than concentrated in the 'asked' group. These results underscore the need for asking clients about abuse to increase the probability of disclosure.

It could be speculated that asking a client about abuse appears to give them permission to disclose. It legitimizes the subject for discussion between the client and the PHN. Even if the client does not disclose immediately, sharing statistics of woman abuse with the client ends the assumption that the abuse being experienced is exclusive to the client and assures her that she is not the only one suffering from abuse and trying to deal with this problem. The abuse is no longer a private matter and the experiences and feelings she is having are validated.

In this study, there was no documentation of abuse inquiry for 25% of women who were assessed with the FA. It is probable that the question was not asked on the first visit for a number of reasons including:

- the PHN knew more visits were to follow;
- it may have been too soon to ask in their relationship;
- the partner may have been at home;
- the surroundings were not sufficiently private; and/or
- children may have been present.

The question could have been asked on a subsequent visit in which case it would have been recorded on a different form in the record. Because low-risk clients are often seen only once, the client records were reviewed to the end of the first visit only for both low-risk and in-depth interviews as well.

Abuse Disclosure

No Partner in the Home. Women most likely to disclose abuse had no partner in the home. It is generally accepted that abused women feel safer talking about their circumstances when the abusing partner is not living with them and so women with no partner in the home may be more likely to disclose abuse.

However, before any conclusions can be drawn, it is important to consider two issues. First, even though the chart documents 'no partner in the home', it is possible that there is a partner but just not living at that address either temporarily or permanently. Secondly, there could be a partner living at that address but the client does not feel inclined to disclose it. For example, if the social assistance system has a 'no spouse in the house' rule, women could be disinclined to reveal a partner at home to the PHN for fear that the information would reach the wrong ears. There is no way to distinguish these various possibilities through a record review. Also, women who have no partner in the home are more likely to be identified as at-risk or potentially at-risk (Groups A and B) and are more likely to receive a home visit and be assessed with the FA. Thus, it is possible that because more women without partners were asked about abuse through the FA, more women without partners disclosed.

Previous Abuse. Previous abuse may have been disclosed more often than current abuse for several reasons. What happened in the past may be safer to address because the abuser has either changed his behavior or is no longer part of the client's life. Because time has elapsed since the abuse occurred, the woman may either be ready to deal with it or may have dealt with it already. The emotions around previous abuse at the time of this asking may be less acute or sensitive, giving the client an opportunity to declare abuse and deal with this issue more comfortably. It was not the focus of this study to confirm these speculations for this population.

Younger Women. For this study population, a larger percentage of young women disclosed than older women. This could be due to the fact that younger women, especially teen mothers, were more likely to be identified as either at-risk or potentially at-risk for poor child development, were assessed with the FA, and therefore asked about abuse. Younger women may be more apt to disclose private issues, such as abuse. Due to more recent campaigns and course content in the schools, the culture for their generation may not view abuse as acceptable or shameful for the victim. As well, the abuse may be a new experience of which they are less accepting and therefore more open to getting help.

Pregnancy and birth, particularly of a first child, are life milestones that trigger change in how women see themselves and their roles. Now that they have a child, the abuse that

women have been experiencing or are beginning to experience becomes a threat to their child as well and is therefore unacceptable. The abuse is incompatible with her new role of protector.

Current Abuse and Referrals. With too few cases, there was very limited statistical power to examine this issue. However, it is interesting to observe the frequencies of choice of referral. The selection of referral to a resource outside the health unit for those reporting current abuse is reflective of the urgent need for the PHN to establish the client's and her children's safety. A referral to an agency specializing in treatment of abused women ensures that the follow-up is immediate and thorough. It is a form of crisis intervention. The outside referral may also be dictated under less urgent circumstances by the client's state of readiness to deal with the abuse.

Limitations of the Study

The information gleaned from the record is only as accurate or complete as the recorder has made it. However, since they are legal health records completed by professionals, inaccuracies should be at a minimum. Further, there were times when the meaning of the recorded comments was unclear with no opportunity to clarify the intent of the recorder. The record is a summary of all the dialogue that occurred during the visit and, as such, the PHN selected which items to record and which to omit. There is no way to determine what may have been omitted from these records, including documentation of abuse disclosure.

Terms were not defined for the clients or PHNs in a consistent manner prior to care delivery or data collection. The study may be subject to the same inconsistency with definitions of current and previous abuse. Potentially, a client could consider previous abuse as with a previous partner rather than last year's abuse from the current partner. Also, there may have been some inconsistencies in identifying whether or not there was a partner in the house.

Recommendations for Future Research

What prompts PHNs to ask clients if they are being abused?

Further study is required to substantiate the suggestion from this study and the current literature that the following measures may make a difference to abuse inquiry rates:

- a protocol that requires asking the question about abuse;
- organizational supports and expectations around building the skill and comfort level required to ask the abuse question and deal with the response;
- prompts in interview scripts that act as reminders and encourage asking about abuse; and
- documentation requirements regarding having asked about abuse and the PHN's interventions, given the client's response.

What is the real incidence of woman abuse in the postpartum population?

Since Group A women, the 'asked' group, was not representative of the entire postpartum population, it should not be assumed that their disclosure rate will apply to all postpartum women. The current post-intervention study may provide this answer.

Will introducing the RUCS protocol into Public Health Nursing practice improve the rate with which abused women are identified and referred for assistance?

This screening protocol was designed to:

- raise awareness of the need to screen all women for woman abuse on a routine basis; and
- guide the decision-making and follow-up activities of health care professionals during the screening process.

The RUCS screening protocol has never been tested in practice. However, research suggests that implementing a screening protocol could increase identification of abused women[6]. This study is the first in a series of studies to identify the impact of introducing RUCS into PHN practice with postpartum clients and clients attending the sexual health and family planning clinics. ❑

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Summary of Reportable Diseases in Ontario - February, 2003

Health Units by Region	Population 2000	AIDS	Campylo.	Chicken-pox	Chlamydia	Enceph./ Meningitis	GAS	Gonorrhea
Algoma	125,109			2	28			2
North Bay	93,505			37	13		2	
Northwestern	91,920			9	20			1
Porcupine	93,680			6	13		1	
Sudbury	199,619		2	28	35			1
Thunder Bay	158,698		3	19	21			1
Timiskaming	37,721				3			
Total - Northern	**800,252**		**5**	**101**	**133**		**3**	**5**
Eastern Ontario	194,945		2		13		1	
Hastings & Prince Edward	159,088				17	1		
Kingston, Frontenac & Lennox	180,225				17	1	1	
Leeds, Grenville & Lanark	163,143		3					
Ottawa	779,274		11	99	98	3	2	14
Renfrew	101,131		1		6		1	1
Total- Eastern	**1,577,806**		**17**	**99**	**151**	**5**	**5**	**15**
Durham	512,271		4	100	59	1	3	9
Haliburton-Kawartha	168,120		2		7		1	
Muskoka-Parry Sound	86,218		1	1				
Peel	1,008,163		20	167	129		2	22
Peterborough	128,881			15	20	1	2	1
Simcoe	377,405							
Toronto - total	2,542,844		73	322	528	5	7	146
North	*627,021*		*16*	*66*	*102*			*27*
South	*688,584*		*24*	*67*	*186*	*2*	*4*	*72*
East	*717,937*		*17*	*140*	*162*	*3*	*2*	*27*
West	*509,302*		*16*	*49*	*78*		*1*	*20*
York	724,969		25		31	4		2
Total - Central East	**5,548,871**		**125**	**605**	**774**	**11**	**15**	**180**
Grey Bruce	157,664		3	7	13			2
Elgin-St. Thomas	84,182			15	3			
Huron	61,097		1		2			
Chatham-Kent	112,897			10	1			
Lambton	131,643							
Middlesex-London	412,976		3		38			7
Oxford	102,561						1	
Perth	75,238		2	4	6	1		
Windsor-Essex	381,672		3		44	1	2	2
Total - Southwest	**1,519,930**		**12**	**36**	**107**	**2**	**3**	**11**
Brant	126,481		3	43	27		3	1
Haldimand-Norfolk	109,536			2	1		2	
Halton	375,705		3		4		2	
Hamilton	498,553	1	5	51	87		4	5
Niagara	423,600		11		41	2	2	7
Waterloo	446,833		5		62		4	6
Wellington-Dufferin-Guelph	241,777		9	29	22		1	1
Total - Central West	**2,222,485**	**1**	**36**	**125**	**244**	**2**	**18**	**20**
February 2003	**11,669,344**	**1**	**195**	**966**	**1,409**	**20**	**44**	**231**
*** Total YTD 2003**		**9**	**426**	**1,804**	**2,915**	**43**	**97**	**459**
*** Total YTD 2002**		**21**	**474**	**2,795**	**3,132**	**59**	**86**	**550**

The Toronto City regions above are now defined as: North - former North York; South - former City of Toronto, West - former Etobicoke and City of York, East - former Scarborough and East York

** Infectious syphilis cases include 'Primary, Secondary and Early Latent' staging effective January 1, 2003

* Adjusted for deletions and late reports

Summary of Reportable Diseases in Ontario - February, 2003

Health Units by Region	Population 2000	AIDS	Campylo.	Chicken-pox	Chlamydia	Enceph./ Meningitis	GAS	Gonorrhea
Algoma	125,109			2	28			2
North Bay	93,505			37	13		2	
Northwestern	91,920			9	20			1
Porcupine	93,680			6	13		1	
Sudbury	199,619		2	28	35			1
Thunder Bay	158,698		3	19	21			1
Timiskaming	37,721				3			
Total - Northern	**800,252**		**5**	**101**	**133**		**3**	**5**
Eastern Ontario	194,945		2		13		1	
Hastings & Prince Edward	159,088				17	1		
Kingston, Frontenac & Lennox	180,225				17	1	1	
Leeds, Grenville & Lanark	163,143		3					
Ottawa	779,274		11	99	98	3	2	14
Renfrew	101,131		1		6		1	1
Total- Eastern	**1,577,806**		**17**	**99**	**151**	**5**	**5**	**15**
Durham	512,271		4	100	59	1	3	9
Haliburton-Kawartha	168,120		2		7		1	
Muskoka-Parry Sound	86,218		1	1				
Peel	1,008,163		20	167	129		2	22
Peterborough	128,881			15	20	1	2	1
Simcoe	377,405							
Toronto - total	2,542,844		73	322	528	5	7	146
North	*627,021*		*16*	*66*	*102*			*27*
South	*688,584*		*24*	*67*	*186*	*2*	*4*	*72*
East	*717,937*		*17*	*140*	*162*	*3*	*2*	*27*
West	*509,302*		*16*	*49*	*78*		*1*	*20*
York	724,969		25		31	4		2
Total - Central East	**5,548,871**		**125**	**605**	**774**	**11**	**15**	**180**
Grey Bruce	157,664		3	7	13			2
Elgin-St. Thomas	84,182			15	3			
Huron	61,097		1		2			
Chatham-Kent	112,897			10	1			
Lambton	131,643							
Middlesex-London	412,976		3		38			7
Oxford	102,561						1	
Perth	75,238		2	4	6	1		
Windsor-Essex	381,672		3		44	1	2	2
Total - Southwest	**1,519,930**		**12**	**36**	**107**	**2**	**3**	**11**
Brant	126,481		3	43	27		3	1
Haldimand-Norfolk	109,536			2	1		2	
Halton	375,705		3		4		2	
Hamilton	498,553	1	5	51	87		4	5
Niagara	423,600		11		41	2	2	7
Waterloo	446,833		5		62		4	6
Wellington-Dufferin-Guelph	241,777		9	29	22		1	1
Total - Central West	**2,222,485**	**1**	**36**	**125**	**244**	**2**	**18**	**20**
February 2003	**11,669,344**	**1**	**195**	**966**	**1,409**	**20**	**44**	**231**
*** Total YTD 2003**	-	**9**	**426**	**1,804**	**2,915**	**43**	**97**	**459**
*** Total YTD 2002**	-	**21**	**474**	**2,795**	**3,132**	**59**	**86**	**550**

The Toronto City regions above are now defined as: North - former North York; South - former City of Toronto; West - former Etobicoke and City of York; East - former Scarborough and East York

** Infectious syphilis cases include 'Primary, Secondary and Early Latent' staging effective January 1, 2003

* Adjusted for deletions and late reports

Summary of Reportable Diseases in Ontario - February, 2003

Health Units by Region	Population 2000	Mumps	Pertussis	Rubella	Salmon.	Shigellosis	Syphilis Infectious**	VTEC
Algoma	125,109		1		1			
North Bay	93,505		1					
Northwestern	91,920							
Porcupine	93,680		4		2			
Sudbury	199,619		1		2			
Thunder Bay	158,698				4	1		
Timiskaming	37,721							
Total - Northern	**800,252**		**7**		**9**	**1**		
Eastern Ontario	194,945				2			1
Hastings & Prince Edward	159,088				1			
Kingston, Frontenac & Lennox	180,225		1					
Leeds, Grenville & Lanark	163,143				1			
Ottawa	779,274		2		9		1	
Renfrew	101,131							
Total- Eastern	**1,577,806**		**3**		**13**		**1**	**1**
Durham	512,271				5	1		
Haliburton-Kawartha	168,120				1			
Muskoka-Parry Sound	86,218							
Peel	1,008,163				13	5		
Peterborough	128,881		1		1			1
Simcoe	377,405				1			
Toronto - total	2,542,844			1	30	8	8	3
North	*627,021*			*1*	*5*			
South	*688,584*				*8*	*6*	*8*	*1*
East	*717,937*				*14*			
West	*509,302*				*3*	*2*		*2*
York	724,969				11			
Total - Central East	**5,548,871**		**1**	**1**	**62**	**14**	**8**	**4**
Grey Bruce	157,664							1
Elgin-St. Thomas	84,182				1			
Huron	61,097					1		1
Chatham-Kent	112,897							
Lambton	131,643							
Middlesex-London	412,976				1			
Oxford	102,561							
Perth	75,238							
Windsor-Essex	381,672				1	4		
Total - Southwest	**1,519,930**				**3**	**5**		**2**
Brant	126,481							
Haldimand-Norfolk	109,536				1			
Halton	375,705		1		3	1		1
Hamilton	498,553				8			3
Niagara	423,600		1		8	1		2
Waterloo	446,833				3	1		1
Wellington-Dufferin-Guelph	241,777		1		6			1
Total - Central West	**2,222,485**		**3**		**29**	**3**		**8**
February 2003	**11,669,344**		**14**	**1**	**116**	**23**	**9**	**15**
*** Total YTD 2003**	-	**2**	**34**	**2**	**249**	**45**	**31**	**89**
*** Total YTD 2002**	-	**5**	**81**		**334**	**40**	**15**	**18**

The Toronto City regions above are now defined as: North - former North York, South - former City of Toronto, West - former Etobicoke and City of York, East - former Scarborough and East York

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